



US Army Corps
of Engineers ®
New England District

Update Report for Massachusetts



Current as of
July 31, 2001

696 Virginia Road, Concord, Massachusetts 01742-2751

Public Affairs Office, 978-318-8237

Home Page: <http://www.nae.usace.army.mil>

Mission

The missions of the New England District, U.S. Army Corps of Engineers include flood prevention and control, emergency response for natural disasters and national emergencies, environmental remediation and restoration, natural resource management, stream bank and shoreline protection, navigation maintenance and improvement, support to military facilities and installations, and engineering and construction support to other federal agencies. The six New England states cover 66,000 square miles and have 6,100 miles of coastline, 11 deep-water ports, 102 recreational and small commercial harbors, 13 major river basins, and thousands of miles of navigable rivers and streams. The district operates and maintains 31 dams, two hurricane barriers and the Cape Cod Canal. Through its Regulatory program, the district processes about 4,000 applications per year for work in waters and wetlands of the six-state region. We employ about 550 professional civilian employees, with about 400 stationed at our headquarters in Concord, Massachusetts. The other Corps of Engineers employees serve at Corps projects and offices throughout the region.

Index

Base Realignment & Closure	16
Defense Environmental Restoration	9
Flood Control Project	22
Flood Damage Reduction	1
Flood Plain Management	6
Formerly Used Site Remediation	15
Military Support	15
Navigation	2
Planning Assistance	7
Recreation/Natural Resource Management	22
Regulatory Program	21
Shoreline/Streambank Protection	5
Special Studies	28
Superfund Assistance	12
Work for Others	20

Flood Damage Reduction

ROUGHANS POINT, REVERE, LYNN, SAUGUS and MALDEN (6th & 7th CDs) - Construction on the Roughans Point Project began in October 1997 and is nearing completion. The \$8.5 million coastal flood protection project will relieve the neighborhood from severe flooding like the Blizzard of 1978 and storms in 1991 and 1992. Authorized by the Water Resources Development Act of 1986, the federal project includes measures for stabilizing and improving existing seawalls, placement of a new rock revetment to reduce wave runup and storm overtopping, and rehabilitation of an existing pump station. The

city of Revere and the Commonwealth's Department of Environmental Management are sponsors for the project. Construction of the revetment and seawalls was finished in November 1999. Construction activity is continuing on the rehabilitation of the existing pumping station (owned by the Commonwealth's Metropolitan District Commission) and other drainage improvements. Rehabilitation of the station began in May 2000, with completion scheduled for the fall 2001. Work on the pumping station has been delayed due to the need to upgrade the existing electrical service. *The city of Revere entered into an agreement*

with Massachusetts Electric for the electrical service, with an August estimated completion.

TOWN BROOK, BRAINTREE AND QUINCY (9th & 10th CD) - The Water Resources Development Act of 1986 authorized federal flood protection consisting of Town River channel modifications near the Southern Artery in Quincy, a 12-foot-diameter deep rock relief tunnel over 4,000 feet long under Quincy Center, and reconstruction of the Old Quincy Dam in Braintree. This federal project is part of an overall flood control system for the Town Brook watershed in cooperation with the Commonwealth of Massachusetts. The total flood control project is estimated at over \$53 million.

The flood protection works were built in three phases. The first phase was constructed by P. Caliacco Corp. of Rockland and included channel work and new culverts at the

downstream end of Town Brook under the Southern Artery. Work on this \$3.3 million phase is complete. The second phase, which is the largest and involves construction of the tunnel under the business district in Quincy, was built by Kajima/Marra-Majestic (joint venture) of Pasadena, California, at a cost of \$24 million. Construction began in November 1993 and is complete. *Both phases are expected to be transferred to the MDC in fall 2001. Completion of Phases I and II has prevented about \$25 million dollars in damages from the March 1999 and March 2001 storm events. The last phase is the reconstruction of the Old Quincy Dam in Braintree. An \$8.7 million contract for this work was awarded in September 1998, to D&C Contracting Co., Inc., of Rockland. Work resumed on the dam in May, after a winter shutdown. Work is approximately 80 percent complete and is expected to be completed in the fall 2001.*

Navigation

BOSTON HARBOR (8th, 9th, & 10th CDs) - The Water Resources Development Act of 1990 authorized a navigation improvement project for Boston Harbor to increase the channel depth to 40 feet in the Mystic River and Reserve Channel and to 38 feet in the Chelsea River. The Massachusetts Port Authority is acting as the project sponsor and is providing the nonfederal cost sharing portion, amounting to 25 percent of the construction costs, with an additional 10 percent reimbursement to the federal government after construction. *The total improvement project cost is estimated at \$17 million. An additional \$20 million was spent on maintenance dredging of material shoaled within the now existing channel depth. Construction was conducted by Great Lakes Dredge and Dock, Inc. The project used an innovated concept in disposing of silty material in deep confined disposal cells dredged below the existing channel and capped with clean sand. The project dredging is scheduled to*

be completed by October 2001. The final capping of the last of the confined aquatic disposal cells in the Mystic River was completed in August 2000. The Massachusetts DEP has given the Corps permission to leave a confined disposal cell in Chelsea Creek uncapped for up to five years so that it can be used for future maintenance dredging.

As work draws to a close on the 40-foot deepening project, the New England District and Massport have begun examining a proposal by Massport to deepen the major entrance channel and main ship channel through the harbor up to South Boston to 45 feet. A reconnaissance study began in December 1999. An expedited reconnaissance report was completed in July 2000 and approved in August 2000. Scoping for detailed feasibility investigations was completed in December 2000, and Massport is currently reviewing the study estimate and feasibility cost sharing agreement.

Sampling and testing for maintenance dredging of the 35- and 40-foot channels outside the areas recently deepened is ongoing. *The first phase of sampling was completed in early January. Additional bioaccumulation test results are in; information is being evaluated and will be coordinated with EPA to determine suitability of the material for various options. Once suitability has been determined, the maintenance project will be coordinated with Massport, state and federal resource agencies.*

CAPE COD CANAL (10th CD) – A \$211,600 contract was awarded to AGM Marine Contractors, Inc., in September 1999, for dredging about 6,000 cubic yards of material from a small area just seaward of Cleveland Ledge Light. The purpose of this work is to straighten the west approach, eliminating the need for maneuvering and improving navigation safety for commercial vessel traffic. *The sand, gravel, and boulders removed from the area have been placed at the Buzzards Bay Disposal Site. Work was suspended due to insufficient equipment, and the contractor has secured equipment capable of completing the work. This new equipment is scheduled to complete the work during the summer 2001.*

CAPE COD CANAL BOURNE AND SAGAMORE BRIDGES (10th CD) - A \$2,361,000 contract was awarded to Haskell Construction Co. in September 1999. The work includes repairs to the concrete piers and abutments for both bridges. *The work started in November 1999 and is scheduled to be completed September 2001.* A separate \$3,427,459 contract was awarded to MIG Corporation in March 2000. The work includes deck repairs and repaving of the roadways of both bridges. The work will primarily be accomplished in five major phases of work during the spring and fall. The contract is scheduled for completion in the spring 2002. A comprehensive traffic management plan will be in place to minimize impact to motorists

using the bridges. *To date, work on the Bourne Bridge is substantially complete with minor work continuing this summer during nighttime hours.*

CAPE COD CANAL RAILROAD BRIDGE (10th CD) - The New England District and Massachusetts Executive Office of Transportation and Construction (EOTC) continue to coordinate the rehabilitation of the Cape Cod Canal railroad bridge. The project is expected to be accomplished in two phases. A \$12.8 million contract for Phase I, which includes steel repairs and painting requiring less than eight consecutive hours of shutdown time, was awarded in August 2000, to Odyssey Contracting. It is slated for completion in October 2002. Phase II would consist of all other items, including bearing and cable replacement, which require bridge outage greater than eight hours at any one time. Plans and specifications for Phase II are being prepared. Emergency repairs to the bridge mitre rails were completed in early December 2000. The railroad is primarily used to transport trash from the Cape to the mainland for disposal. *The contractor has completed concrete repairs and is currently performing steel repairs/replacements. Sandblasting and painting efforts are expected to be initiated in August 2001. Phase II plans and specifications are expected to be completed by September 2001.*

NEW BEDFORD & FAIRHAVEN HARBOR (4th CD) – The New England District is assisting the Massachusetts Office of Coastal Zone Management in preparation of a Dredged Material Management Plan (DMMP) for maintenance dredging of the navigation channels in New Bedford and Fairhaven harbors. The main deep-draft channel to New Bedford has an authorized depth of 30 feet, while the shallow draft channels for the fishing fleet at Fairhaven have depths of 15 and 10 feet.

A review of navigation traffic information has indicated that the shallower channels on the Fairhaven side of the harbor require maintenance dredging of about 70,000 cubic yards of shoal material. The deeper channels serving the New Bedford waterfront would require dredging of about 1.3 million cubic yards to restore the authorized project dimensions; however navigation traffic projections offered by the city do not, at this time, demonstrate a need for dredging those areas. The state's study has examined the dredging needs of the federal navigation project for New Bedford, and numerous state, municipal and private facility dredging needs for a 20-year period. The state must issue an Environmental Impact Report recommending potential options for the disposal of dredged materials from New Bedford. Following publication of the state report, the state and municipalities, with assistance from the New England District and other federal agencies, will determine what additional investigations and procedures are necessary to select and implement a long-term dredged material disposal plan for New Bedford and Fairhaven Harbor. State DMMP study efforts have been delayed, but are continuing and the need for further Corps action will be determined when the state's plans have been finalized.

PLYMOUTH LONG BEACH DIKE (10th CD) - Plans and specifications are being prepared to restore Long Beach DiKE to authorized dimensions. This will require rebuilding a 2,000-foot-long section of the dike. Environmental constraints restrict work to fall and winter months to avoid interference with endangered bird nesting. The town of Plymouth is preparing an Environmental Impact Report (EIR) for a subsequent town-sponsored beach nourishment project. Work on the dike project cannot move forward until the EIR is complete and approved. The town faced significant opposition to their proposed offshore borrow source for its beach nourishment material and are now looking at

scaling back its scope of work. Massachusetts's officials have indicated the federal project for Long Beach DiKE can go forward with efforts now focused on securing a federal resource agency agreement.

SALEM HARBOR (6th CD) –The New England District has completed its analysis of biological test results on sediment samples from the main channel and Derby Wharf channel segments of the federal navigation project at Salem Harbor. *The Corps, in consultation with U.S. EPA, has determined that the dredged material is suitable for unconfined open water disposal in Massachusetts Bay. As the materials were found suitable for ocean disposal, maintenance dredging of these federal project areas may proceed independently of the state's long-term dredged material management study.*

The Corps is also assisting the Massachusetts Office of Coastal Zone Management in preparing a Dredged Material Management Plan for materials to be dredged from the South River channel feature of the federal project, as well as numerous municipal and private dredging projects, which may prove unsuitable for open water disposal. The state study is focused on securing disposal options, with sufficient capacity for a 20-year period, for dredged materials deemed unsuitable for unconfined open water disposal, and therefore requiring some means of confined disposal. A state Environmental Impact Report recommending potential options for the disposal of dredged materials from Salem Harbor has been deferred, pending resolution of harbor development issues by the city of Salem. Following publication of the state report, the state and municipalities, with assistance from the New England District and other federal agencies, will determine what additional investigations and procedures are necessary to select and implement a long-term dredged material disposal plan for Salem Harbor.

SAUGUS RIVER (6th CD) – The New England District, in partnership with the town of Saugus and the Massachusetts Department of Environmental Management (DEM) is constructing a navigation project for the Saugus River. Dredging and construction of dredged material disposal facilities began in December 2000. Dredging was completed in March 2001, and the remaining effort consists of closure of the disposal containment site on RESCO property and work at the mitigation area. The town of Saugus and DEM provided 20 percent of the \$3.8 million project cost, and paid the full cost of dredging adjacent municipal access and berthing areas.

GREEN HARBOR, MARSHFIELD (10th CD) - Annual maintenance dredging of the six-foot and eight-foot deep, 100-foot wide entrance channel was performed by the government-owned dredge CURRITUCK from May 15, 2001 through June 8, 2001. About 35,000 cubic yards of sand and cobbles were removed from the channel and placed in the previously used near shore disposal area off of Green Harbor Beach.

AUNT LYDIA'S COVE, CHATHAM (10th CD) - Maintenance dredging of the 8-foot deep, 100-foot wide entrance channel was performed by the Government-owned dredge CURRITUCK from June 9, 2001 through July 8, 2001. About 50,000 cubic yards of sand were removed from the channel and disposed of at the previously used near-shore disposal area. Some material was also placed in the nearshore area of Andrews Harding Beach. Long-term approvals necessary to perform this maintenance when needed and when funding becomes available have been obtained.

SESUIT HARBOR, DENNIS (10th CD) - Maintenance dredging of the 6-foot deep, 100-foot wide entrance channel was performed by the Government-owned dredge CURRITUCK in July. About 20,000 cubic yards of sand were removed from the channel and placed in the previously used near-shore disposal area off of Cold Storage Beach. In coordination with Massachusetts' officials, long-term approvals necessary to perform this work when needed and when funding becomes available have been obtained.

Shoreline/Streambank Protection

HOOSIC RIVER, WILLIAMSTOWN (1st CD) – A Section 14 Planning, Design and Analysis effort is currently being undertaken to protect a 300-foot section of eroding riverbank along the Hoosic River. The erosion has threatened two main lateral sewer pipes. The local sponsors for the project are the Massachusetts Department of Environmental Management and the town of Williamstown. A Project Cooperation Agreement is currently being executed. Construction of the estimated \$250,000 project is planned for fall 2001.

MERRIMACK RIVER, HAVERHILL (6th CD) – A Section 14 Planning, Design and Analysis effort is currently being undertaken to protect a 900-foot section of eroding riverbank along the Merrimack River. The erosion has threatened Riverside Avenue and a main

lateral sewer pipe. The local sponsor for the project is the city of Haverhill. Due to environmental permitting constraints, the local sponsor requested that execution of the project be delayed. The Corps will reactivate this project pending local permit issuance.

NORTH NANTASKET BEACH (10th CD) - A Section 103 Hurricane and Storm Damage Prevention Detailed Project study to determine the feasibility of providing coastal storm damage protection to the 10,000-foot-long North Nantasket Beach in Hull is examining protection to backshore properties against flooding and wave attack. The local sponsor is the Massachusetts Department of Environmental Management (DEM). The \$220,000 study cost is shared 50 percent from the Corps and 50 percent from the state and the town of Hull. Last year, both the state and

the town requested additional engineering analysis on a locally preferred plan. A contract was awarded for that additional work, and that analysis did not result in a change to the Corps recommended plan for federal project features. The Corps is consulting with DEM and the town of Hull to determine if there is support for a locally preferred plan.

NANTASKET BEACH (MDC), HULL (10th CD)

- A draft Section 103 Hurricane and Storm Damage Prevention Detailed Project Report was completed in January 1997 in response to a request for assistance from the Metropolitan District Commission. The investigation examined potential solutions to coastal erosion and backshore flooding at the MDC's Nantasket Beach Reservation in Hull. Although the draft report was endorsed by the MDC, nonfederal funding to proceed with the project was not available at that time. Later, the MDC requested that the report be finalized so that project approval for implementation could be pursued. The Corps worked with the MDC to complete project details. A revised

draft report was sent to the MDC in January 2000. The project calls for ten-year protection by placement of 226,000 cubic yards of added beach fill at an estimated cost of \$4.6 million. The MDC has requested additional work be incorporated into the final Feasibility Report. The environmental assessment will be revised to include the repair and rehabilitation of the seawall that the MDC plans to perform (see below).

NANTASKET SEAWALL (MDC), HULL (10th CD) - The Metropolitan District Commission (MDC) has entered into an agreement to study, analyze and perform design services to repair the seawall along Nantasket Beach. *The MDC approved the 50 percent plans and specifications submission by the New England District and directed the completion of the design project. Completion is expected by November 2001. These plans and specifications will then be incorporated into those for the Nantasket Beach Section 103 Coastal Storm Damage Reduction Project listed above as requested by the MDC.*

Flood Plain Management Services

NORTHERN MASSACHUSETTS/NEW HAMPSHIRE HURRICANE EVACUATION STUDY

- This study is being conducted under a federally funded program cosponsored by the Corps of Engineers and the Federal Emergency Management Agency (FEMA). The objective of the program is to provide hurricane surge mapping and a technical data report from which the state and local communities can develop/update preparedness plans for hurricanes. Draft inundation maps for New Hampshire and Massachusetts south and north shore communities have been provided. This information allows state and local officials to identify hurricane evacuation areas and the population within those areas. Final inundation mapping is completed. American

Red Cross is now assisting in the development of the evacuation maps. Delaying the release of this information until July 2001, in order to use U.S. Census 2000 data, is being discussed with the Massachusetts Emergency Management Agency and FEMA.

TEN MILE RIVER FLOOD STUDY, NORTH ATTLEBORO & ATTLEBORO, MA (3rd CD)

- Representatives of the towns of North Attleboro and Attleboro, and the Ten Mile River Watershed team have requested that the Corps identify actions that will improve the capacity of the Ten Mile River during flooding events. Initially, the district looked at the possibility of preparing a flood routing model of the entire river through these communities. However, it was determined that the cost of updated topographic surveys alone would exceed the funding provided under this

program. Working with the communities, it was decided to evaluate two priority flood reduction solutions in each town (Falls Pond By-Pass Channel and Route 1 Wetland Restoration in North Attleboro, and modifications to Dodgeville Dam and Manchester Reservoir in Attleboro). The evaluation will utilize existing information to determine each site's general flood reduction potential and also highlight additional analysis required, including costs, to further refine that determination. The study was initiated in January 1999 and a draft report is scheduled for completion in July 2001.

IPSWICH RIVER FLOOD MITIGATION STUDY, MA (6th CD) – The New England District was requested by the town of North Reading to conduct an investigation of flooding along the Ipswich River. Specifically, the district will investigate the effects of Bostick Dam on upstream flood levels. Dam operation

and removal alternatives will be examined to determine their potential to lower flood levels in upstream areas. The study began this spring and is expected to be completed by December 2001.

TOWN CREEK FLOOD STUDY, SALISBURY, MA (6th CD) – The New England District was requested by the Massachusetts Wetlands Restoration Program (MWRP) to investigate tidal flow in the Town Creek area of Salisbury. Specifically, the district will analyze the waterbody to determine the effects on backshore flooding if the existing railroad embankment (abandoned) is modified through either culvert enlargement or complete removal. MWRP will use the information to determine the viability of restoring the salt marsh behind the embankment. The study began in November 2000 and will be completed in November 2001.

Planning Assistance

ASSABET RIVER TOTAL MAXIMUM DAILY LOADS (TMDL) STUDY (3rd, 4th and 5th CDs)

- The Massachusetts Department of Environmental Protection cost-shared water quality sampling, analysis and related tasks relevant to the determination of total maximum daily loads of nutrients to the Assabet River. *Approximately \$446,000 of federal and state funds combined have been earmarked to date. Work began in July 1999. Contracts totaling approximately \$377,800 have been awarded to date using funds under the Planning Assistance funds. A draft final report for the Assabet River was published in December 2000. A final report is expected by November 2001. A draft report on the Concord River work is expected in December 2001. Additional funds for the Sudbury-Assabet-Concord Rivers (SuAsCo) water quality work have also been obtained from the Massachusetts Department of Environmental Protection under the Corps Support for Others program.*

BILLINGS CREEK COASTAL WETLAND STUDY (10th CD)

- Billings Creek Wetland is located in Quincy near the mouth of the Neponset River. This area was within the boundaries of the former Squantum Naval Air Station. Remnants of air station roadways fill areas, and bunkers are still scattered within the marsh area. Past development in the area has resulted in alterations to marsh surface as well as changes in tidal flow to the site. The district conducted a site assessment study under the Corps Planning Assistance to States Program. The study is cost shared 50/50 with the city of Quincy.

The goals of the study are to characterize existing tidal and vegetation conditions at the site and develop a plan to improve the health of the wetland. It is envisioned that the study will be conducted in two phases. Phase I included establishing existing site conditions, tide gage setup relative to NGVD, tidal monitoring, vegetation characterization, marsh

elevation survey, and an identification of alternatives for further study in Phase II. *Initial Phase I study findings were presented to the community in September 2000 and the draft Phase I report was provided to the community in June 2001. Initiating Phase II will depend on availability of local cost-share funding.*

CONNECTICUT RIVER WATERSHED WETLANDS RESTORATION STUDY (1st & 2nd CDs) – The Massachusetts Executive Office of Environmental Affairs, Wetlands Restoration Program (MWRP), has requested that the New England District conduct an analysis that would identify and evaluate potential wetland restoration sites in the Connecticut River watershed. Three sub-watersheds will be studied, specifically: the two Mill Rivers and the Manhan River. This \$100,000 cost shared (50/50) study began in May 1999 and is currently scheduled to be completed in the fall 2001. *However, MWRP has recently asked to expand the area of study by roughly 20 percent. We are currently negotiating the cost and timing of this added effort, however, we do not anticipate re-initiating this effort until early 2002.*

LAKE COMO RESTORATION STUDY (3rd CD) - Lake Como is an urban lake located in the Ten Mile River watershed in the communities of Attleboro and North Attleboro. The lake is man-made and is the result of the impoundment of an unnamed stream, which flows to the Seven-Mile River in Attleboro. The lake consists of a main basin (about five acres in size and 1,050 feet in length) in Attleboro and a smaller west basin (about two acres in size and 800 feet in length) in North Attleboro. A local road, called Como Drive, separates the two basins, with flow through an 18-inch culvert under the roadway. The lake outlet at the east end of the main basin consists of an overflow weir to a 24-inch culvert under U.S. Route One. A 3,000-foot-long tributary stream to the lake originates in North Attleboro near Cushman Drive and flows east to enter the

west basin of the lake. The watershed is estimated to be small, on the order of only about 250 acres.

The main basin of the lake is considered to be degraded by the Massachusetts Department of Environmental Protection (DEP), Division of Watershed Management. The west basin is extensively vegetated and shallow, and problems observed by the DEP at the main basin during the summer of 1997 included dense algae blooms and very dense aquatic plant cover. The goals of the study are to characterize the existing lake conditions and identify alternatives to restore the lake. One restoration objective is that the local communities of North Attleboro and Attleboro would like to increase the amount of open water in the main and west basins for recreation and aesthetic purposes. The study will be performed under a cost sharing agreement with the Massachusetts Department of Environmental Management. The cost share agreement was signed in April 2000. The study was initiated in August 2000 and will be completed in September 2001.

MERRIMACK RIVER WATERSHED SCOPING STUDY (5th & 6th CDs) – Over the past several decades, significant improvements have been realized in the overall quality of the Merrimack River due to federal, state, local community, and private investment in water pollution control facilities. However, there are water quality concerns that still require significant investigation and remediation.

Communities along the Merrimack River in Massachusetts and southern New Hampshire are undertaking planning efforts that could result in as much as \$500 million in combined sewer overflow (CSO) control projects. In addition, future stormwater and total maximum daily load (TMDL) regulations may result in additional responsibilities. Contributions from non-point source pollution to the Merrimack

have not been estimated and could be a major contributor to much of the water pollution problems in the river. The local communities are concerned that pollution control requirements are being mandated by state and federal regulatory agencies without a clear understanding of the pollution sources and the water quality and ecosystem benefits to be achieved.

The purpose of this \$90,000 scoping study is

to identify the number and range of water quality issues, ecosystem problems and opportunities along sections of the Merrimack River and to develop a framework for a comprehensive study of identified watershed areas. The cost sharing (50 percent federal/ 50 percent nonfederal) agreement between the Corps and the local communities of Haverhill, Lowell, and Lawrence was signed in September 2000. *We began work on the study in November 2000 and will be completed in November 2001.*

Defense Environmental Restoration Program (DERP)

This Congressionally directed effort (PL 98-212) provides for expanded work in environmental restoration. It emphasizes the identification, investigation and prompt cleanup of hazardous and toxic waste; unexploded ordnance; and unsafe buildings, structures and debris at current and former military facilities. A total of 327 formerly used Defense sites have been identified in Massachusetts. Site and project eligibility investigations at 324 sites are now complete, including 206 where no work was found to be necessary. The three remaining sites, **Quabbin Bombing Range (1st CD)** and two Job Corps facilities in **Chicopee (2nd CD)**, will be scheduled in the future when funding priorities allow. Of the 118 sites where work was needed, the following efforts are underway:

A \$148,124 contract was awarded in June 2000 to Arthur D. Little, Inc., to perform a Phase I Initial Site Investigation at the Former Burn Area at the **Hingham Naval Ammunition Depot Annex (Wampatuck State Park, 10th CD)**. *This phase was completed in May 2001. A modification was awarded on June 29, 2001 to complete a Phase II Comprehensive Site Assessment by the fall 2001.*

*Remediation work, consisting of follow-up groundwater monitoring, is continuing at the Lonczak Drive area of the **Westover Air Force Base in Chicopee (2nd CD)**. The area of contamination there is greater than originally estimated, and an estimated \$1.4 million will be required to remediate this additional area. This work will be performed when funding is available. In the pump house #2 area, site characterization will be completed in July 2001. After that is complete, an Activity and Use Limitation will be recommended to Massachusetts DEP. No remediation is contemplated for the pump house #2 area.*

Award of a remediation contract was made in March 2001 to Environmental Chemical Corporation in the amount of \$665,000 for work at the **East Boston (8th CD) Naval Fuel Annex**. *Work is expected to be completed by the end of September 2001.*

There are two sites associated with the former **Watertown Arsenal (8th CD)**. 1) At the Watertown Mall site, the Corps performed a Phase II Comprehensive Site Assessment and Radiological Risk Assessment (done in accordance with the Massachusetts Contingency Plan). These reports were officially submitted to MA DEP and the Nuclear Regulatory Commission (NRC) for review in 1998. At the request of the NRC, the Corps did some follow-up radiological sampling, and submitted a draft risk assessment in July 2000.

At the request of the Army Research Lab (ARL), the NRC has removed this site from the ARL's radiological license. 2) In June 2000, the Corps awarded Harding ESE a \$500,000 contract for work at the General Services Administration property adjacent to the mall. Harding ESE is to prepare a Phase II site assessment report, a radiological cleanup risk assessment report, and to perform additional investigations. We expect this effort to be complete in the summer 2001.

Funding (\$1.1 million) has been received for site preparatory work, cleanup and demolition of area 1 (out of 8) of Building 108 at the **Charlestown Navy Yard (8th CD)**. The original demolition contract was suspended in fiscal year 1997 due to unexpected site conditions. Due to reduced funding levels, demolition is being accomplished in phases over several years. *Demolition is presently on hold and will continue when priorities and funding allow. It is estimated that an additional \$3 million will be needed to complete the demolition work.*

The files for the Westover Bulk Petroleum, Oil and Lubricant (POL) Terminal and Salvage Yard in **Chicopee (2nd CD)** have been reviewed as part of our potentially responsible party investigation. *As a result of this review it was determined that additional contaminant information for both soil and groundwater should be obtained. A contract to obtain that information was awarded in June 2001. Results should be available this fiscal year at which time an evaluation will be made as to whether additional work is required. No further activities are planned for the Salvage Yard.*

The U.S. Army Engineering and Support Center, Huntsville, completed the fieldwork portion of the Engineering Evaluation/Cost Analysis (EE/CA) of the former **Camp Wellfleet (10th CD)** in 1998. The New England District is involved with environmental, real estate and public affairs coordination. The

Corps completed a groundwater sampling investigation of chemicals and explosives in April/May 2000. This investigation did not identify any contaminants above action levels. *Another round of sampling will be completed in calendar year 2001.* A meeting with the MA DEP to discuss further work, funding and priorities was held in November 2000. It was agreed that geophysical investigations in the vicinity of the beach area would be initiated by the end of June 2001, subject to continued funding availability. *A meeting with MA DEP and the National Park Service was held on May 15, 2001 to discuss future actions at the site. At the meeting all parties agreed that if a fly-over of the site was conducted, the geophysical investigations of the beach area as previously discussed would no longer be necessary. The fly-over can only be conducted in the months of January, February or March to avoid any conflicts with the birds. A contract was awarded to ORISE in June 2001 for the fly-over. The EE/CA Action Memorandum was signed in April 2001.*

Contamination at Building 105, **Charlestown Navy Yard (8th CD)** has been removed from the soil and interior surfaces. A risk assessment addressing the final cleanup goals was completed, and EPA is reviewing the results. *Remediation of these interior surfaces will be performed once EPA and MA DEP have approved cleanup standards and methods subject to the availability of funding. Decontamination of the existing equipment is complete. Remediation is being coordinated with all state and federal agencies involved in historical preservation issues.*

The Corps of Engineers and Raytheon are sharing the cost of an investigation at the Former **Lowell Ordnance Plant (5th CD)**. The Phase II document and risk assessment were submitted by Raytheon in July 2000 and have been evaluated. *Raytheon will submit the Phase III document by December 2001. Once that is complete, negotiations will begin to*

determine what costs of remediation, if any, is the U.S. Government's responsibility.

At the **Boston Naval Annex (9th CD)**, we awarded a contract in January 2001 to develop a Response Action Outcome (RAO) statement. *We expect to file this RAO by the end of September 2001, which, once accepted, will close out the site consistent with the Massachusetts Contingency Plan.*

Remedial construction projects are complete at:

First District

Westover Light Annex #2, **Granby**
Westover Light Annex #3, **Amherst**
New Salem Gap Filler Annex, **New Salem**
Westover Remote Site, **Shutesbury**

Second District

Springfield Armory-Rail, **Springfield**
Chapman Valve Exp, **Springfield**
Westover AFB, **Chicopee**
Westover AFB, **Ludlow**
Hadley Nike Site

Third District

Swansea Nike Site

Fourth District

Nike Site PR-19, Rehoboth

Sixth District

Beverly Nike Site
Danvers/Topsfield, Nike Site
Fort Ruckman, **Nahant**
Nike Site BO-17, **Nahant**
Nike Site BO-84, **Burlington**
Ipswich Data Collection Lab Annex, **Ipswich**
Fort Ruckman, **Nahant**

Seventh District

Lincoln Nike Site
Nike Site BO-03, Reading/Wakefield

Eighth District

Fort Strong, **Winthrop**
East Boston Naval Fuel Annex
East Boston Naval Fuel Annex
Charlestown Navy Yard
Charlestown Navy Yard, Tank Removal
Fort Warren, **Boston**

Eighth & Ninth Districts

Fort Standish, **Boston**

Ninth District

South Boston Naval Annex
Needham Nike Site

Tenth District

Camp Candoit, **Cotuit**
Martha's Vineyard Airport
Hingham School Property, **Hingham**
Fort Andrews, **Hull**
Hingham Army Reserve Training Center
Hingham Naval Ammunition Depot & Annex
Hingham Nike Site
Martha's Vineyard South Beach
Hingham/Cohasset Naval Ammunition Depot
Camp Wellfleet
Nike Site BO-37, **Quincy**
Nike Site BO-40, **Quincy**
Fort Revere, **Hull**
Hingham Naval Ammunition Depot Annex
Misham Point Electronics Research Annex,
Dartmouth
Squantum Electronics Research Center,
Quincy
Strawberry Point Fire Control Station, **Scituate**
Point Allerton Military Reservation, **Hull**
Point Allerton Surface Craft Detector Site, **Hull**
Holly Hill Radar Station, **Marshfield**
Nantucket NAVFAC, Tom Nevers Naval Base
Hingham Naval Ammunition Depot
Camp Edwards, **Sandwich**
Campbell School, **Bourne**

Work for the Environmental Protection Agency

The New England District is the Corps of Engineers' total support agency for the Environmental Protection Agency's Region I (New England) program for those federal-lead projects assigned to the Corps by EPA. This includes responsibility for design, construction execution, and some operation and maintenance of remediation projects. In addition, the district is providing technical assistance upon request to Region I for other federal-lead projects assigned by EPA to private firms, as well as for some Potential Responsible Party (PRP) remediation under Superfund.

Superfund Assistance

ASHLAND (5th CD) – The Nyanza site consists of four operable units (OU) to address contaminated soil (OU #1), groundwater (OU #2), continuing source areas (OU #3), and the Sudbury River (OU #4). The Corps of Engineers has supported EPA at this site since the late 1980s with activity currently underway in support of OU #2 and OU #3.

EPA is reevaluating the OU #2 Risk Assessment and has requested technical assistance from the New England District in this endeavor. We are currently monitoring the groundwater plume through regularly scheduled sampling events. The next sampling event is scheduled for fall 2001. We are also performing toxicity testing to address the impact of the contaminated groundwater plume entering the river. Additional field work will be performed in the June/July timeframe.

Operable Unit #3 involves the remediation of the four continuing contamination source areas to the Sudbury River. A Record of Decision was signed in 1993, which outlined the removal of the mercury-contaminated

sediments from the four source areas and disposal under the Operable Unit #1 cap. The New England District completed the Final Remedial Design in 1998, and construction activities began in spring 1999 and were essentially completed in November. Only minor wetland restoration work remains to be completed in the June/July timeframe. The overall project is estimated to cost \$10 million.

FAIRHAVEN (4th CD) – The Atlas Tack Corp. Superfund Site, located in Fairhaven, is a former industrial manufacturing facility whose soils, sediments, groundwater and surface water are contaminated with heavy metals, volatile organic compounds and other contaminants. The site's wetlands are filled with wastes from the former manufacturing processes that included electroplating, acid washing, enameling, and painting. A Record of Decision was signed in March 2000 which describes excavation, treatment and off-site disposal of contaminated soils and sediments.

The Corps is assisting EPA in conducting a pre-remedial design investigation of the Boy's Creek tidal marsh adjacent to the former facility planned for completion this fall. Phase I of the pre-design investigation involves soil investigations and Phase II includes ecological investigations and disposal of investigation derived wastes. It is anticipated that the Corps will participate in an estimated \$17 million remedial design and action upon completion of the pre-design study.

HOLBROOK (10th CD) – The New England District's support to the Baird & McGuire site began in 1990 and has involved the construction of a groundwater treatment facility, the excavation and incineration of approximately 248,000 tons of contaminated material and the subsequent restoration of the site, and the excavation and incineration of contaminated sediments from the Cochato River. We currently operate the groundwater treatment plant through a contract with

Professional Services Group (PSG) at an annual cost of approximately \$4 million.

LOWELL (5th CD) – The Silresim Site is a 4.5 acre area located in an industrial area of Lowell. The New England District designed and constructed a groundwater treatment facility at this site. We have operated this facility since November 1995 and will continue in this role for the foreseeable future. We have also installed a soil vapor extraction system on a portion of the site. This system was shut off in December 1999 after approximately one year of operation. EPA is reevaluating the approach for remediating this site and has asked the New England District to collect additional site data, revise the risk assessment, evaluate other technologies and revise the site's Record of Decision. Additional site investigations are complete and the final report should be available in July.

NEW BEDFORD (4th CD) - We completed dredging the Hot Spot portion of the New Bedford Harbor Superfund Site in 1995. This five-acre area contained 14,000 cubic yards of highly contaminated sediments, which were stored in a confined disposal facility (CDF) located on the New Bedford shoreline just north of Coggeshall Street. We maintained the CDF and adjacent facilities until EPA signed its Record of Decision in April 1999, determining that the sediments would be dewatered and then hauled to a commercially approved landfill. Construction began in August 1999 and the last load of contaminated sediment left the site in mid-April 2000. This phase of the work cost approximately \$8 million.

EPA signed the Record of Decision for remediating the remainder of the harbor in September 1998. The \$340 million project involves dredging about 500,000 cubic yards of contaminated sediments from the estuary and lower harbor with containment of the sediments in Confined Disposal Facilities

(CDFs) which would be constructed along the New Bedford shoreline. In addition, the project includes constructing facilities to treat the water pumped from the harbor during dredging operations, placing interim and final caps or covers on the CDFs, and relocating utilities, including ComElectric's power cables which cross the harbor. Design activities on this operable unit are well underway. On-site studies focusing on dredging, water treatment and dewatering technologies were accomplished in the fall 2000 and show the potential for significant project savings and a shorter construction schedule.

Relocation of ComElectric's power cables resumed in March 2001 and should be completed in the fall 2001. The "Early Action" clean up of about one-acre of wetlands near residential properties started in February 2001 and was completed with restoration by the summer 2001. Construction of CDF "C," starting with the relocation of the Combined Sewer Outfall (CSO), started in December 2000 and the CSO was completed in May 2001. The construction of CDF "C" at Sawyer Street has been delayed pending EPA's decision whether to build CDFs or to transport and dispose (T&D) dredged material off-site to a landfill, or some combination of the two. EPA's decision should be made by December 2001 following public review of the T&D alternative. In the interim, the design and real estate acquisition will continue for a dewatering and material handling facility to remove water from dredged material, which will be needed for all alternatives. Dredging work for remediation should begin by mid-2003. Construction and dredging are scheduled to be completed by the end of 2006, about three years ahead of the original estimate depending on the level of project funding.

NORWOOD (9th CD) – The New England District has designed and constructed a groundwater treatment facility at the Norwood

PCB Superfund Site, decontaminated equipment from the Grant Gear Facility, and completed the restoration of Meadow Brook as well as overseeing other remedial actions accomplished by the Responsible Parties. We have been operating the groundwater treatment facility at an annual cost of approximately \$500,000. The plant was shut down in June 2000 due to significantly reduced contaminant levels in the groundwater. Decommissioning of the plant was completed and the plant put into "stored-in-place" status on October 6, 2000. We will continue to monitor contaminant levels in the groundwater and in Meadow Brook over the next one-two years before a final decision on the future use of the groundwater treatment plant is made.

GENERAL ELECTRIC/HOUSATONIC RIVER, PITTSFIELD (1st CD) - The General Electric (GE) facility encompasses an area of approximately 300 acres along the north bank of the Housatonic River in Pittsfield. Past operations by GE have caused significant contamination with PCBs and other compounds at this facility (soil, groundwater, and buildings) and in the Housatonic River. In September 1998, EPA and GE reached an Agreement in Principle for the environmental and economic restoration of Pittsfield and southern Berkshire County. This agreement was approved by a Consent Decree entered in the U.S. Circuit Court on October 27, 2000. Under the terms of the agreement, GE is responsible for cleanup of the first half-mile of the river beginning at the GE facility, the GE plant site and other areas located in Pittsfield. *GE cleanup of the half-mile stretch of the river starting at the GE facility and ending at the Lyman Street Bridge started in October 1999 and is expected to continue until April 2002. At the request of EPA, New England District is providing construction oversight and engineering assistance.*

EPA has determined that a non-time critical removal action is needed in the 1.5-mile

stretch of the Housatonic River extending from Lyman Street, Pittsfield (downstream limit of GE property), to the confluence of the West Branch of the Housatonic River. EPA signed an Action Memo on November 21, 2000, presenting a proposed removal action for the 1.5-mile reach consisting of the excavation and disposal of approximately 95,000 cubic yards of contaminated sediment and riverbank soils. The excavated areas will be backfilled with clean material. The remediation will consist of a combination of sheet piling and pump bypass to allow for excavation in the 'dry.' Habitat restoration will be met through a combination of regrading, vegetation, bioengineering and potential installation of habitat improvements. *The 1-½ mile removal action will take approximately five years to complete at an estimated cost of \$53 million. The cost will be jointly financed by GE and EPA based on the cost sharing procedures contained in the Consent Decree.*

The New England District awarded a Site Specific Environmental Remediation Contract (SSERC) to Roy F. Weston in April 2000, for this 1-½ mile reach of the river and to provide technical support to EPA in other areas as needed. It is a \$150 million, five-year contract with a scope that includes investigation, design, construction, O&M, technical oversight and support. *The design for the excavation and restoration of the 1-½ mile reach is underway. The construction start of the 1-½ mile removal action will begin as soon as possible after GE's completion of the first ½ - mile removal, which is currently scheduled for April 2002.*

EPA is utilizing the SSERC to continue with studies and extensive modeling efforts for the next 20 miles of the Housatonic River. A cleanup decision on the lower river will be made by EPA after completion of its studies and will be implemented by GE.

CONSTRUCTION GRANTS PROGRAM - In

1978, the Environmental Protection Agency (EPA) and the Corps of Engineers (COE) entered into an interagency agreement (IAG) to establish the COE mission in the oversight responsibilities for the Construction Grants Program (CGP). Consequently, Regional EPA-COE agreements have been executed by COE's divisions and or districts in accordance with the provisions and requirements of the IAG. Since 1978, the Corps has performed various forms of support for the CGP projects throughout New England. Presently, the New England District is

monitoring construction progress at wastewater treatment plants and facilities in Massachusetts. Projects are located in the following communities: **Danvers, Pioneer Valley Planning Commission (Chicopee, 2nd CD; Holyoke, 1st CD; South Hadley, 2nd CD, and Springfield 2nd CD), Gloucester (6th CD), Lynn (6th CD), Marblehead (6th CD), New Bedford (4th CD), Newburyport (6th CD), Peabody (6th CD), Salem (6th CD), and the Massachusetts Water Resources Authority (8th, 9th, and 10th CDs).**

Formerly Utilized Site Remedial Action Program (FUSRAP)

FORMER SHPACK LANDFILL SITE, NORTON/ATTLEBORO (4th CD) - The Shpack site is an eight-acre abandoned domestic and industrial landfill which operated from 1946 to 1965. It is located along the Norton/Attleboro town boundary with approximately 5.5 acres in Norton and 2.5 acres in Attleboro. The town of Norton and Attleboro Landfill, Inc., own the property. The contaminants of concern include radioactive compounds, volatile organic compounds and heavy metals. The New England District's role at this site focuses on the radioactive contamination, which is believed to have come from Metals and Controls, Inc. (now Texas Instruments) and the local jewelry industry,

which used the landfill to dispose of trash and other materials from 1957-1965. The site was also listed on the National Priority List (NPL) in 1986, and EPA signed an Administrative Order by Consent with a Group of Settling Parties (which includes Texas Instruments).

The New England District has completed work plans for additional focused site characterization work to be completed this summer. High voltage transmission lines crossing the site have been raised to allow the next phase of site characterization to proceed. We are currently investigating Potentially Responsible Parties for the radiological contamination, and hope to make a decision about future action at the site by the end of July. Our work is being coordinated with EPA/Responsible Party initiatives at the site.

Support to the Military

MASSACHUSETTS MILITARY RESERVATION (10th CD) - In August 1999, the Joint Program Office (JPO) at the Massachusetts Military Reservation (MMR) tasked New England District to provide MMR and surrounding communities on Upper Cape Cod with a three-million gallon per day drinking water supply system. Providing the drinking water system has been directed by the Deputy Under-Secretary of Defense for Environmental

Security (DUSD-ES) because of the effect of contaminated groundwater in the area caused by past military activity on the reservation.

The project consists of four interrelated activities: water source development, environmental documentation, design, and construction. The project team, which includes our contractor Foster-Wheeler, is required to find the correct quantity of environmentally-safe water in accordance with Massachusetts Department of Environmental Protection

requirements, then design and construct a water distribution system to provide the drinking water. Construction of the project began in September 2000 and is expected to be completed by July 2001.

In January 2000, the Army National Guard asked the Corps to furnish a Contained Detonation Chamber in support of its upcoming ordnance and disposal efforts at MMR. The chamber arrived at MMR in June, and a demonstration was held in June 2000. *The chamber will continue to be used for the remainder of this calendar year. To date, hundreds of items of UXO have been destroyed in the chamber. The district is also working with the Guard to safely store ordnance encountered during investigation activities and to develop alternatives to safely*

destroy items on an environmentally compatible way.

In September 2000, the National Guard Bureau announced its decision to use the New England District as supervisory contractor for the Impact Area Groundwater Study. The study is being conducted in accordance with Administrative Orders by EPA under the Safe Drinking Water Act. The transition to supervisory contractor was complete in January 2001. The work is estimated to cost \$250 million, last six to ten years and involve completing groundwater and UXO studies followed by cleanup project implementation. *The Corps is currently working with the Guard to develop both long term and short term goals to accomplish the project.*

Base Realignment and Closure

U.S. ARMY MATERIALS TECHNOLOGY LABORATORY, WATERTOWN (8th CD) - The New England District is providing remedial design, environmental remediation, cultural resources compliance, and real estate transfer activities associated with the closure of the Materials Technology Laboratory (MTL) in Watertown. The closure was accomplished under the Base Closure and Realignment Act of 1988 (BRAC I). The New England District completed the MTL closure EIS process, and the Record of Decision (ROD) was signed by the Assistant Secretary of the Army (Installations, Logistics and Environment) in 1991. The Army Material Command completed the disposal and reuse EIS in 1995, and that Record of Decision was signed in 1996. The Army identified three operating units at MTL for environmental evaluation and remediation - groundwater/soil and the Charles River, which have the U.S. EPA providing regulatory oversight, and indoor chemical cleanup, which is being regulated by the Massachusetts Department of

Environmental Protection (MADEP). The EPA announced the placement of MTL on the National Priorities List in 1994.

The New England District completed soil remediation of the 37-acre MTL parcel based on plans in the ROD, which called for soil excavation and off-site disposal/reuse. The \$2.5 million remediation contract was completed in 1997, with the final closeout report transmitted in 1998. EPA deleted this parcel from the NPL in November 1999. Also completed was the remediation of indoor building surfaces, including removing hazardous and toxic waste (HTW), shock sensitive materials, fume hoods, and drains, and addressing lead paint and asbestos. The original \$5.5 million contract increased to \$9.3 million, however, due to the expanded scope of cleanup needed.

The 11-acre Charles River Park area was separated out and remediation initiated in 1997. This work was deferred while a Feasibility Study Addendum was prepared to evaluate options. The New England District

restarted remediation of the park in September 2000 and will complete this phase in 2001. In 1998, we prepared an environmental assessment for the disposal and reuse of this parcel, which is expected to be transferred to the Metropolitan District Commission for continued park use.

The New England District completed its \$18 million effort for the removal of low-level radiological waste (LLRW) from the research reactor, disposed of these wastes in 1992, and completed demolition of the reactor shell in 1994. We also completed the removal and treatment of LLRW from nine research buildings and final termination surveys in 1995. The Nuclear Regulatory Commission issued termination of the nuclear materials licenses in July 1997. The cost of the facility decommissioning was \$45 million.

The New England District prepared the application to nominate the MTL Historic District for inclusion on the National Register of Historic Places, it was added to the list on May 12, 1999. Our office has also performed intensive historical and archaeological investigations in 1995 and 1996 for the Watertown West archaeological site, finding artifacts dating back to 3000 B.C. Our Real Estate Office completed the McKinney Screening for Homeless Providers and the state/local screening in 1995. In 1998, the Army transferred 30 acres to the Watertown Arsenal Development Corporation and the Commander's Quarters and seven-acre park to the town of Watertown.

On the Charles River, the project team of Army, regulators and river trustees had been working to develop an innovative solution to address CERCLA contaminants and resources of the river, but were unable to reach a consensus within CERCLA and fiscal constraints. Therefore, the Army has shifted its strategy and will be initiating a Baseline Ecological Risk Assessment (BERA) to assess possible

impacts to the resources in the river. Completion of the BERA is expected in 2003.

The district will continue remediation of the Charles River Park portion of the former Army Material Technology Laboratory. Soil remediation is being accomplished this summer at two riverbank areas in the Charles River Park and a riverbank and dock area at the Watertown Yacht Club. Foster-Wheeler Environmental Corporation will accomplish the work. Sampling conducted in 2000 revealed that the soils in these areas contained levels of polycyclic aromatic hydrocarbons (PAHs) and a pesticide (4-4' DDT) that exceeded the U.S. Army's Record of Decision (ROD) cleanup standards. Excavation of a 100-foot section of the Watertown Yacht Club riverbank started in April and will be completed shortly. Subsequently, work along a 90-foot long section on the western end and a 150-foot section on the eastern side of the Charles River Park riverbank will be initiated and take an estimated four weeks to complete.

Before removing the contaminated riverbank soils, erosion and sediment controls will be installed and maintained on the edges of the Charles River adjacent to the riverbank areas to be excavated. Vegetation and trees will be cleared in the riverbank areas only as necessary to complete the soil excavation. Once confirmatory sampling indicates that the bottom and sides of the excavation meet the ROD cleanup standards, these areas will be backfilled with clean material and restored with appropriate plantings as approved by the Watertown Conservation Commission and the Metropolitan District Commission (MDC). New park benches will be installed in late May/early June and the park re-seeded. Once the grass has been established, the surrounding fence will be removed and the park will reopen to the public. After work is completed, the Army will transfer the property to the MDC for operation and maintenance as part of its overall park system. *Work at the Yacht Club*

area commenced in July to remove a 40,000 square-foot area-walking path with new pavement by mid-September.

FORT DEVENS, AYER (5th CD) – Fort Devens was selected for cessation of operations and closure under the Department of Defense Base Realignment and Closure Act of 1990 (Public Law 101-50). Fort Devens is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List (NPL) site which is located in the towns of Ayer and Shirley (Middlesex County) and Harvard and Lancaster (Worcester County), approximately 35 miles northwest of Boston. In 1991, the New England District assumed the mission of implementing BRAC 91 related environmental restoration work at Fort Devens. The district has also been preparing real estate transfer documents, including federal property screening, appraisals, and transfer negotiations; documentation for the findings of suitability to transfer (FOST); and deed preparation for the Army at Fort Devens.

Prior to the official closure of Fort Devens in 1996, the installation occupied 9,300 acres and was divided into the North, Main and South posts. In May 1996, the Army closed Fort Devens and portions of the Main and North posts, with 3,040 acres (except for that being transferred to federal agencies) conveyed to the Massachusetts Government Land Bank/ Massachusetts Development and Finance Agency, Devens Commerce Center (MDFA) by negotiated sale or lease. The property retained by the Army was realigned as the Devens Reserve Forces Training Area, with 444 acres pending lease or transfer following completion of the ongoing environmental remediation efforts. In 1997, 243.62 acres were transferred to other federal agencies; 221.62 acres to the Department of Justice-Bureau of Prisons and 22 acres to the Department of Labor-Job Corps Center. During 1998 and 1999, another three parcels

of property totaling 6.9 acres of the former Main Post was transferred to the MDFA for Innovation and Business Technology use. Also in 1999, 95 acres of the former Main Post was transferred to MDFA for Rail, Industrial, and Trade-Related Use, and 836 acres along the Nashua River Area was transferred to the Department of Interior-U.S. Fish & Wildlife for use as an open space as part of the Oxbow National Wildlife Refuge.

A total of 324 environmental investigation units (e.g., Operable Units (OU)) were initially identified for investigation under CERCLA. No Further Action (NFA) decision documents, which signify that no further action is required at these sites as agreed among the representatives of the BRAC Cleanup Team (BCT), were signed on 285 OUs after investigation, and 14 OUs have had environmental remediation work already completed. The district continues to work closely with the BCT on the remaining 25 OUs that require completing environmental investigation and restoration activities and reuse/real estate transfer activities.

The district is continuing to perform long-term monitoring of the Shepley's Hill Landfill, the South Post Impact Area, the former Fort Devens Elementary School, the former Defense Reutilization and Marketing Office Yard, the former Petroleum, Oil, Lubricant Storage Area, and two former gas station sites. At Shepley's Landfill, the district completed the 60 percent extraction system design required by the Record of Decision and is currently performing additional investigations as a result of the five-year site review required by CERCLA. Implementation of a remedial action is anticipated to be accomplished before the 2003 five-year review.

The Army and EPA signed the Final Record of Decision (ROD) July 1999 for consolidating a total estimated 300,000 cubic yards of landfilled debris from six former landfill sites

on Fort Devens. On June 28, 2000, the Army, EPA, MA DEP and MDFA jointly announced the decision of selecting the best-value alternative to construct a new on-site landfill at the former golf course driving range (located on land that the Army previously transferred to the MDFA) and place nonhazardous waste materials from six former landfill sites at that location. The district is utilizing its pre-placed remedial contract with Stone & Webster Construction, A Shaw Company, of Boston, Mass., for the construction of the new consolidated landfill. Construction of the new landfill began on September 25, 2000, and is expected to be completed by April 2003.

Construction of a new 15-acre landfill is on going which will be used to consolidate wastes from six former landfill sites on Fort Devens. Construction started in late September 2000 and approximately five percent of the work has been completed to date. The landfill is expected to be completed by April 2003.

Two remaining major OUs in the Remedial Investigation/Feasibility Study (RI/FS) stage are Areas of Concern (AOCs) 50 and 57. AOC 50 involves a perchloroethylene (PCE) contaminated groundwater plume that extends under the former Moore Army Airfield that is located in the former North Post portion of the Devens RFTA. AOC 57 contains three areas totaling 30 acres on the southeast side of Barnum Road which have soil and groundwater contamination consisting of fuel-related compounds, chlorinated solvents, and dichlorobenzene from historical vehicle maintenance waste disposal. A feasibility study is presently being prepared for AOC 50, which will identify alternative remedial actions for site cleanup. A proposed plan is presently out for public comment for AOC 57, with a Record of Decision anticipated to be signed in spring 2001 and subsequent remedial action implemented.

The first statutory-required comprehensive

five-year review of remedial actions performed on Devens Reserve Forces Training Area CERCLA sites was conducted from May 2000 through September 2000 for the following sites:

- Barnum Road Maintenance Yards (AOCs 44 and 52)
- Shepley's Hill Landfill Operable Unit (AOCs 4, 5 and 18)
- AOC 63 AX
- AOCs 43 G & J
- South Post Impact Area (AOCs 25, 26, 27, and 41-groundwater)
- AOCs 32 and 43
- AOC 69W
- AOCs 9, 11, 40 and 41-solid waste, and SAs 6, 12 and 13

In addition, reviews were also performed at the following sites as a matter of policy for which there was a CERCLA design document (e.g. Action Memorandum):

- SA 34, 35 and 71
- AOCs 50 and 57
- AREE 61 Z, 63 BD, 63 BE, 63 BQ, 63 BH, 63 AM

The purpose of the five-year review is to determine whether the remedy at a site is protective of human health and the environment. The review also reports deficiencies, if any, found during the review, and identifies recommended actions to address. The five-year Review Report was completed in September 2000.

SUDBURY TRAINING ANNEX (5th CD) - The U.S. Army Forces Command (FORSCOM) requested that the New England District support the Base Realignment and Closure (BRAC) process at this facility. The New England District completed environmental cleanup of the site in September 2000 and is pursuing real estate disposal as outlined below. In FY 2001, the Army will perform its first five-year review of the project actions and

work with EPA to have the site deleted from the NPL.

The New England District constructed a landfill with an impermeable cap in 1996 to consolidate contaminants from a landfill (site A7) containing approximately 2,000 cubic yards of debris and waste; a clothing and material “burn” test site (A9) with approximately 200 cubic yards of soil contaminated with petroleum, oils, and lubricants (POL); and a small site (A4) containing approximately 20 cubic yards of soil with elevated levels of metals. The New England District continues to monitor the effectiveness of the cap to reduce landfill leachate in accordance with the approved long-term monitoring and maintenance plan. Biannual monitoring of 13 wells began in June 1997, and the latest round was completed in April 2000. Readings show decreasing levels of contaminants in groundwater.

The New England District began the real estate screening process in 1995. Of the 2,292 acres on the site, 2,165 were transferred to the U.S. Fish and Wildlife Service in September 2000. Additionally, 90 acres have been transferred to the Federal Emergency Management Agency and four acres to the U.S. Air Force.

Based on the recommendations of an Archival Search Report, the U.S. Army Engineering and Support Center completed an Ordnance and Explosives (OE) investigation in 1997. The investigation found no ordnance, and thus a No Further Action decision was rendered. The Archival Search Report also indicated buildings, which were used for explosives

research, and remediation was completed in the summer of 2000.

The district also completed the excavation and disposal of 3,700 cubic yards of arsenic-contaminated soil in September 2000. The plan for this remediation was based on a 1999 facility-wide arsenic investigation and involved extensive coordination among the Army, EPA, MADEP and the Fish and Wildlife Service. We are completing a comprehensive five-year review of all sites where a CERCLA Record of Decision has been executed and for all sites for which there is a CERCLA decision document completed. We are also conducting spring and fall field sampling as part of the Army’s Long Term Monitoring and Maintenance program. *We will be conducting an annual inspection of the landfill this fall to evaluate its condition and determine if any maintenance is required.*

HINGHAM RESERVE CENTER (10th CD) -

The U.S. Army Forces Command (FORSCOM), requested that the New England District support the Base Realignment and Closure (BRAC) process at this facility. The New England District prepared a Phase II Comprehensive Site Assessment and other reports, performed various removal actions, and completed a Draft Sampling Plan for completion of data collection. The district has transferred the project back to FORSCOM, which will complete the environmental remediation of the site through a guaranteed fixed price remediation contract. The Commonwealth of Massachusetts, Department of Environmental Protection (MA DEP) is the lead regulatory agency for this facility.

Work for Others

HOUSING AND URBAN DEVELOPMENT -

The Corps of Engineers has entered into an interagency agreement with the Department of Housing and Urban Development. In

accordance with the agreement the Corps performs physical inspections, contract administration reviews, drawings and specifications reviews, and final inspections for Housing Authorities located throughout Massachusetts.

SUDBURY-ASSABET-CONCORD RIVER (SuAsCo) BASIN TMDLs (3rd, 5th & 7th CDs)

project: *The MA DEP provided funds for the Corps to perform extensive water quality data collection in support of SuAsCo total maximum daily loads (TMDL) investigations. Support for Others funds in the amount of \$77,500 were used in data collection efforts that are also being performed under our Planning Assistance program. A draft final report on the Assabet River investigations was published in December 2000, however, it was released without the important "Interpretation" section, which was published in May 2001. A final report will be published following receipt*

of DEP comments on this section - currently expected by November 2001.

NATIONAL PARK SERVICE, EASTHAM (10th CD) - A contract to construct a groundwater treatment plant with recovery and injection wells at the Nauset Ranger Station for the National Park Service was negotiated with an 8-A contractor, Coastal Environmental Corporation, in September 1999. Work began on the project in January 2000 and was operational in September. Minor changes requested by the National Park Service were completed in March 2001.

Regulatory Program

Department of the Army permits are required from the Corps of Engineers under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. The Corps reviews permit applications for work affecting navigable waters under our Section 10 authority and the discharge of fill material into all waters, including inland wetlands, under Section 404. *At the end of March, there were 207 active applications for regulated work in Massachusetts. During April, May, and June, 251 new applications were received. Final actions were taken on 299 applications, including seven individual permits, 65 general permits, 22 not required, and no denials. The balance at the end of June was 159 active files.*

PROGRAMMATIC GENERAL PERMIT - The New England District has comprehensive Programmatic General Permits (PGPs) in place in each of the six New England states covering work with minimal impact on the aquatic environment. Up to 98 percent of all permits issued in New England are PGPs. The PGPs are based on the state thresholds for most categories of environmental impacts, and applicants generally need only file with the state. The federal screening is virtually

transparent to applicants, and the PGP approval, in most of the states, is either included in the state approval letter or mailed simultaneously. Applications appropriately covered under the PGPs are generally approved in under 30 days. Applicants have commented favorably about the simplicity, predictability and efficiency of the PGPs. The Massachusetts PGP was reissued in January 2000 for another five years.

NEW BEDFORD AIRPORT EXPANSION PROJECT (4th CD) - The city of New Bedford, with funding from the Massachusetts Aeronautics Commission and the Federal Aviation Administration (FAA), proposes to develop a runway extension and regional air cargo facility at the New Bedford Regional Airport. The purpose of the project is to provide increased cargo service in southeastern Massachusetts, to enhance the efficiency of state and national air transportation systems, and to promote regional economic development. The project may require filling up to an estimated 30 acres of wetland. These numbers are expected to decrease as the study progresses. The New Bedford Airport project is still undergoing environmental review and analysis as well as possible modification to respond to various environmental issues and to minimize its adverse impacts. At present

the target is for the FAA to issue a draft EIS sometime in the late summer or fall of 2001. We will continue to coordinate with the project proponents and local interests as needed and to respond to requests for information pertinent to Corps jurisdiction.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (GREENBUSH LINE) (10th CD) - The Massachusetts Bay Transportation Authority (MBTA) has requested a permit to place fill within a total of 5.11 acres of wetlands and waterways for restoration of commuter rail service on the Greenbush branch of the Old Colony Railroad line in the towns of Braintree, Weymouth, Hingham, Cohasset, and Scituate. The Corps conducted a public hearing in August 1997 to solicit public comments and input about the proposal. Numerous concerns were raised concerning potential alternative transportation systems, the project's potential effects on air quality, noise, public safety, traffic, historic resources, flood plains, wetlands, and, in general, the needs and welfare of the people. The MBTA has indicated that it would submit a revised application providing additional information and project modifications. Changes to the locations of station sites and work within Town River in Hingham are anticipated. After submittal of the revised permit application, a new notice will be issued to inform the public of these

changes. A Programmatic Agreement to ensure compliance with Section 106 of the National Historic Preservation Act has been reviewed and signed by the consulting parties. The MBTA can now complete the state MEPA review.

WENTWORTH HILLS GOLF CLUB (3rd CD) - DenMark Realty Trust began to construct an 18-hole Golf Course and private Country Club in Cumberland, Rhode Island, and Plainville, Massachusetts. The project will provide recreational golf and private facilities for members only. This is an "after-the-fact" application. Approximately 22,000 square feet of wetlands was filled without a Section 404 Permit. The majority of the overstory clearing has been completed, and approximately four acres of wetlands cleared. The applicant proposes to remove fill from and restore approximately 4,600 square feet of the affected wetlands. Additionally, the applicant proposes to construct approximately 17,700 square feet of new wetlands. A public hearing was held in December 2000, at the Tri-County Regional Vocational Technical High School in Franklin, Mass. Final public comments have been reviewed, the applicant has been advised of the additional information that will be needed for our analysis and has provided some of the necessary information. The applicant is proceeding with the state MEPA review.

Flood Control Projects & Recreation/ Natural Resource Management

The New England District provides flood control benefits and, working in cooperation with agencies of the Commonwealth of Massachusetts, provides diverse quality outdoor recreational opportunity on each of the 11 flood control reservoirs it has constructed in the Bay State, the Cape Cod Canal, and the Charles River Natural Valley Storage Area located within the

Commonwealth. Information on each is provided below.

BARRE FALLS DAM (1st CD), on the Ware River in Barre, was completed in 1958 at a cost of \$2 million. The 885-foot-long and 69-foot-high dam can impound a lake, which can store 7.8 billion gallons of water. Barre Falls has prevented \$23.2 million in flood damages. Over 50,000 annual visitors enjoy picnicking, hiking, fishing and hunting at Barre

Falls Dam. Barre Falls Dam's website is: <http://www.nae.usace.army.mil/recreati/bfd/bfdhome.htm>

2001 Season activities: Enjoy canoeing, picnicking, fishing, hiking, bike riding, wildlife observation, and the scenery from sunrise to sunset. Hunting during season is permitted. Call the office at (978) 928-4712 to arrange for a group gatehouse tour.

A group of volunteers constructed a Disc Golf Course at Barre Falls Dam. The 18-hole course weaves around the dam, overlook inlet and picnic areas. The course was constructed under a volunteer agreement and will remain in place for one year. Course maps and score cards are available at the project. The course has been very popular with disc golfers. Please contact Barre Falls Dam at (978) 928-4712 for additional information.

BIRCH HILL DAM (1st CD) is situated on the Millers River in Royalston. Completed in 1942 at a cost of \$4.6 million, the 1,400-foot-long, 56-foot-high dam can store 16.2 billion gallons of water. To date, damages amounting to more than \$58.7 million have been prevented. Birch Hill offers many fine recreational opportunities. The Lake Denison Recreational Area, managed by the Massachusetts Division of Forests and Parks, provides camping, swimming, picnicking, boating, and fishing. Much of the remaining reservoir area is managed by the Massachusetts Division of Fisheries and Wildlife as part of the Birch Hill Wildlife Management Area. Popular activities include hiking, hunting, fishing, mountain biking, and snowmobiling in season. The Birch Hill Dam and reservoir area attracts more than 1.3 million visitors annually. *Birch Hill Dam's website is: <http://www.nae.usace.army.mil/recreati/bhd/bhdhome.htm>*

The schedule of the interpretive programs at Birch Hill Dam for the remainder of the summer

includes:

August 4 & 5 - Park Manger James Bacon will be sharing the benefit of his 35 years at Birch Hill Dam. Jim will be discussing the dam's history and the changes he has seen in the Birch Hill Area as well as showing and explaining the features and functions of the dam. The program will begin at 11a.m. on both days.

August 11 & 12 - Ranger Phillips and Ranger Koziol will lead a mountain bike tour of the Birch Hill area. Project features will be viewed and discussed and unique habitat will be viewed on each day. The 11th will be a leisurely one-hour ride while the 12th will be a hard challenging three-hour ride. Bring water and snacks on each day and meet at 11a.m. at the project office.

August 18 & 19 - Ranger Phillips will conduct a habitat hike through a variety of native New England forests on both of these dates. The hike will last about two hours and the terrain being walked is relatively flat. You can expect to see lots of native wildlife and plants, which will be discussed upon seeing them. Meet at the parking lot by the Birch Hill Dam sign, at the entrance to the dam. Bring water and snacks for the hike, also you are invited to have lunch on the lawn with Ranger Phillips after the hike so bring a bagged lunch if you wish.

BHEER -Coming this fall, the Birch Hill Everyman Extreme Relay, (BHEER). A three-leg relay race consisting of a kayak or canoe leg, mountain bike leg and a cross-country run. More details will be listed on their website. Express your interest in this event by e-mailing the Birch Hill Park Ranger.

Polychlorinated Biphenyls (PCBs) were discovered in 1987 in tissue samples taken from fish caught in the Otter and Millers rivers. The Corps of Engineers is working, in

cooperation with the Massachusetts Department of Environmental Protection, to determine the extent of the problem and possible source(s). A Phase II Site Assessment Report and Ecological Risk Characterization of PCBs at Birch Hill Reservoir was completed in July 2000 and determined that there are no immediate actions required by the Corps to protect public health, safety and welfare, at Birch Hill, such as closure of a portion or all of the reservoir area.

The study and report confirmed that PCB concentrations at Birch Hill remain high enough that they may pose a potential risk to human health and the environment. A significant risk to human health exists, primarily through the consumption of fish from the Millers and Otter rivers and contact with sediment in the Otter River at Birch Hill. A condition of no significant risk to safety and public welfare exists at the site. The Corps provided copies of the report to the Massachusetts Department of Environmental Protection, the Massachusetts Executive Office of Environmental Affairs and the Massachusetts Department of Public Health.

The Massachusetts Department of Public Health and the Massachusetts Division of Fisheries and Wildlife published and posted a Fisheries Consumption Advisory on the Millers River in 1988 and there are also Fish Consumption Advisories published in the Abstracts of the Massachusetts Fish and Wildlife Laws. The Corps recent investigations and the study suggest that these advisories should remain in effect.

The Massachusetts Department of Environmental Protection (DEP) met with Potentially Responsible Parties (PRPs) on December 18, 2000, to discuss the PCB issues and try to better define and understand the problem. DEP has identified possible sources of the PCB contamination and is

looking for ways to collectively involve PRPs in future investigations and resolution of the problem.

BUFFUMVILLE LAKE (2nd CD) on the Little River in Charlton was completed in 1958 at a cost of \$3 million. The 12,700 acre-feet of storage at Buffumville is equal to 3.9 billion gallons of water and is impounded by a 3,255-foot-long, 66-foot-high earthen dam. Buffumville Dam has prevented more than \$54.6 million in damages. Picnicking, swimming, boating, fishing, hunting, disc (Frisbee) golf, volleyball, horseshoes, two rental shelters and sight-seeing attract more than 63,000 visitors annually. Buffumville Lake's website is: <http://www.nae.usace.army.mil/recreati/bvl/bvlhome.htm>

CHARLES RIVER NATURAL VALLEY STORAGE AREA (2nd, 3rd, 4th, 7th, 8th, and 9th CDs) was authorized by Congress in March 1974. Federal funds totaling \$8,300,000 were used to purchase 3,210 acres of fee land and 4,891 acres of restrictive easement. The Charles River Natural Valley Storage (CRNVS) is located in 16 towns (Bellingham, Dedham, Dover, Franklin, Holliston, Medfield, Medway, Millis, Natick, Needham, Newton, Norfolk, Sherborn, Walpole, West Roxbury, and Wrentham) in three counties. The CRNVS acts as a flood control project by using the natural flood attenuation characteristics of the over 8,000 acres of wetlands purchased. The project attracts over 40,000 visitors a year. Visitors bike, boat and canoe, camp, fish, hike, hunt, view wildlife and other passive recreational uses. The CRNVS is a wilderness surrounded by development, forever set aside for the enjoyment of all. The CRNVS website is <http://www.nae.usace.army.mil/recreati/crn/crnhome.htm>

CONANT BROOK DAM (2nd CD), on the brook of the same name in Monson, can store

1.2 billion gallons of water behind the 1,050-foot-long, 85-foot-high impoundment. Completed in 1966 at a cost of \$3 million, the project annually attracts around 20,000 visitors to its scenic trails for hiking, horseback riding, and cross-country skiing and for its fine trout fishing.

EAST BRIMFIELD LAKE (2nd CD) on the Quinebaug River in Sturbridge was constructed at a cost of \$7 million. The 520-foot-long, 55-foot-high dam can impound a 29,900-acre-foot reservoir, which is equivalent to 9.7 billion gallons of water. Since it was placed in operation in 1960, it has prevented damages of \$45 million. The reservoir area offers fine recreational opportunities, including swimming, picnicking, fishing, hunting, canoeing, boating, and nature study, and attracts more than 124,000 visitors annually.

HODGES VILLAGE DAM (2nd CD), across the French River in Oxford, was constructed at a cost of \$4.4 million. The 2,140-foot-long, 55-foot-high dam can impound a 13,200-acre-foot reservoir, which is equivalent to 4.2 billion gallons of water. Since it was placed in operation in 1959, it has prevented damages of \$52 million. The reservoir area offers fine recreational opportunities, including picnicking, fishing, hunting, mountain bike and horseback riding, and nature study to the more than 28,000 visitors it welcomes each year. Hodges Village Dam's website is: <http://www.nae.usace.army.mil/recreati/hvd/hvdhome.htm>

KNIGHTVILLE DAM (1st CD), on the Westfield River in Huntington, was constructed at a cost of \$3.4 million. The 1,200-foot-long, 160-foot-high dam can impound a 49,000-acre-foot reservoir (equivalent to 15.8 billion gallons of water). Since its construction in 1941, it has prevented damages of \$143.4 million. More than 35,000 visitors enjoy the

variety of recreational pursuits available at Knightville, including picnicking, hiking, fishing, hunting, group camping, and snowmobiling. Knightville Dam's website is: <http://www.nae.usace.army.mil/kvd/knvhome.htm>

Special interpretive programs are offered and include such topics as Water Safety, the Water Cycle, the History of the Corps of Engineers and Flood Control. Rangers can also prepare a program that deals with the Corps of Engineers and its missions, water resources or natural resources and tailor it to your needs. These programs can be given at the Dam, or we can come to your group or school. Contact the Park Ranger for more information on any of these programs or to schedule a program.

We'd like to invite you to our offering of educational and recreational programs at Knightville Dam. These family-oriented activities currently include trail walks and dam tours. Programs are open to the public and best of all they are free. All ages are welcome; however, we do ask adults to accompany their children. Please call at 413-667-3430 or e-mail thomas.m.wisnauckas@nae02.usace.army.mil to check for added programs or before attending our programs, as the schedule is subject to change.

LITTLEVILLE LAKE (1st CD), on the Middle Branch of the Westfield River in Huntington and Chester, is 1,360 feet long, 164 feet high and cost \$7 million to construct. Its lake can hold a 23,000-acre-foot or 7.5 billion-gallon reservoir. It has prevented damages totaling \$54.1 million since it was placed in operation in 1965. The reservoir area offers many fine recreational opportunities, including picnicking, fishing, hunting, canoeing, boating and nature study, and attracts more than 45,000 visitors annually. Littleville Lake's website is: <http://www.nae.usace.army.mil/recreati/lvl/lvlhome.htm>

Special interpretive programs are offered and

include such topics as Water Safety, the Water Cycle, the History of the Corps of Engineers and Flood Control. Rangers can also prepare a program that deals with the Corps of Engineers and its missions, water resources or natural resources and tailor it to your needs. These programs can be given here at the Dam, or we can come to your group. Contact the Park Ranger for more information on any of these programs or to schedule a program.

We'd like to invite you to our offering of educational and recreational programs at Littleville Lake. These family-oriented activities currently include trail walks and dam tours. Programs are open to the public and best of all they are free. All ages are welcome; however, we do ask adults to accompany their children. Please call at 413-667-3656 or e-mail thomas.m.wisnauckas@nae02.usace.army.mil to check for added programs or before attending our programs, as the schedule is subject to change.

TULLY LAKE (1st CD), situated on the East Branch of the Tully River in Royalston, is 1,570 feet long and 62 feet high. Completed in 1949 at a cost of \$1.6 million, the dam has a reservoir storage capacity of 7.1 billion gallons of water. Tully Lake prevented damages of \$21.7 million. Nearly 30,000 visitors annually enjoy picnicking, hiking, boating, fishing, and hunting at Tully Lake. Tully Lake's website is: <http://www.nae.usace.army.mil/tul/tulhome.htm>

The schedule of the interpretive programs at Tully Lake for the remainder of the summer includes:

August 9 - Lake Grove School Field Trip. Tentatively scheduled for 10 am, a Park Ranger will provide a dam tour to students studying the Millers River Watershed.

August 10 - Learning to Use Identification Keys (part 1) at Athol Public Library. Call (978) 249-

9150 for more information or to sign up!

August 12 - Learning to Use Identification Keys (part 2) at Tully Lake. Hike around the lake and identify species using keys. Call (978) 249-9150 for more information or to sign up!

August 17 - Tully Lake Slide Show at Athol Public Library. Call (978) 249-9150 for more information or to sign up!

August 19 - Hike the Tully Lake Area. Hike around the lake, up to Jacob's Hill, Spirit Falls, to Long Pond, and back. Call (978) 249-9150 for more information or to sign up!

WEST HILL DAM (2nd CD), on the West River in Uxbridge, was completed in 1961 at a cost of \$2.3 million. The 2,400-foot-long, 51-foot-high dam can impound a 12,400-acre-foot lake capable of storing four billion gallons of water. It has prevented damages of more than \$30 million. More than 52,000 annual visitors enjoy picnicking, swimming, hiking, fishing and hunting at the 1,401-acre facility.

The dam embankment was constructed of random and impervious fill with a limited upstream impervious blanket without any significant foundation seepage control features. Seepage through the foundation materials occurred during operation of the project for flood events in 1979, 1987 and 1998. These flood events represent estimated frequencies of 5 percent (20 year), 3 percent (33 year) and 40 to 50 percent (2 to 3 year) respectively. Corrective measures following the first two events included installation of a downstream toe drain in 1979 and extension of the toe drain in 1989. Additionally, piezometers were installed after the 1998 event to monitor conditions. Restricted operational flood pool levels have been imposed in order to maintain the project's overall safety.

Drawing on the dam's past performance,

borings, and piezometer data, it was concluded that the dam embankment and foundation, including the 1979 and 1989 toe drains, are insufficient to effectively prevent the development of adverse seepage conditions when the reservoir level exceeds a 15-foot pool stage (about a three year flood event). Solution involves construction of a concrete panel cut-off wall tied into bedrock along the full length of the dam embankment. This wall will prevent the development of detrimental seepage conditions, including piping, boils, and internal erosion.

Restoration construction will first lower the dam embankment ten feet over its entire length to provide a staging area for the construction. Material removed will be stockpiled on site and will be used to rebuild the embankment to its original height after placement of the concrete cut-off wall. This construction will require acquisition of adjacent real estate in either fee or easement. During the work, West Hill Dam will remain partially operational to store water in the event of a flood.

A "Major Rehabilitation Report and Dam Safety Assurance Report" was completed in 1999. Design and development of plans and specifications for the rehabilitation were approved and a solicitation requesting proposals for the rehabilitation was issued in December 2000. *Proposals have been reviewed and a contract award for \$12.7 million was made to a joint venture of Soletanche-McManus on June 8, 2001. A pre-construction conference was held on July 13, 2001. Construction is scheduled to begin in August 2001. A two-year construction period is anticipated.*

WESTVILLE LAKE (2nd CD) in Southbridge and Sturbridge is 560 feet long and 78 feet high and cost \$5.7 million to construct. Its

lake can store an 11,100 acre-foot reservoir, which amounts to 3.6 billion gallons of water. It has prevented damages totaling \$22.9 million since it was placed in operation in 1962. The reservoir area offers fine recreational opportunities, including picnicking, fishing, hunting, canoeing, boating, and nature study and annually attracts more than 55,000 visitors.

Recently, a cooperative trail committee was formed to plan and implement the construction of a 3.5-mile rail trail on the abandoned Grand Trunk railbed from Route 131 in Southbridge to Route 15 in Sturbridge. The committee includes the towns of Southbridge and Sturbridge, Corps of Engineers, Quinebaug River Basin Team Leader from the Executive Office of Environmental Affairs, Quinebaug/Shetucket National Heritage Corridor, UMass at Amherst Dept. of Landscape Architecture and Regional Planning, Opacum Land Trust, National Park Service Rivers and Trails and the Grand Trunk Trail Blazers. The goal is to construct a multiuse trail on the railbed making federal and town property more accessible for recreational opportunities. Estimated completion is within a five-year period or sooner depending on funding. *The trail was designated a National Recreational Trail in a ceremony at Westville Lake on June 6, 2001.*

The NEW BEDFORD-FAIRHAVEN-ACUSHNET HURRICANE PROTECTION PROJECT (4th CD) was completed in 1966 at a cost of \$18.6 million and provides a gated barrier across New Bedford-Fairhaven Harbor and supplementary dikes in the Clarks Cove area of New Bedford and Fairhaven. The twin sector gates can seal the 150-foot-wide navigation opening in 12 minutes and were operated 9 times in fiscal year 2000. This barrier affords tidal-flood protection to an area of about 1,400 acres. To date, \$17.6 million in damages have been prevented.

Special Studies

BLACKSTONE RIVER (3rd CD) - A \$400,000 federally-funded reconnaissance study focusing on ecological needs in the Blackstone River watershed was completed in 1997. The study identified the federal interest in environmental restoration plans for the watershed, and determined the type and cost of prototype projects that could potentially be constructed throughout the watershed. A Feasibility Cost Share Agreement was signed in 1999 with the Commonwealth of Massachusetts Executive Office of Environmental Affairs, however, Rhode Island declined further participation. A \$2 million cost-shared Feasibility Study is currently underway. Key components of this study include an assessment of the threat from contaminated sediments, an inventorying of environmental restoration opportunities in the watershed, a determination of the role of impoundment's on water quality and sediment resuspension, and an inventorying of dams and their condition. The Feasibility Study will result in the recommendation of a single plan of restoration for the watershed with components likely to include wetlands restoration/creation, stabilization and/or removal of dams, riparian buffer creation, sediment removal or capping, and bank stabilization. The Feasibility Study shall be completed by September 2004. Results of this study will be forwarded to the U.S. Congress and to the Commonwealth of Massachusetts for approval and cost-shared construction.

BLACKWATER RIVER, SALISBURY (6th CD) - The New England District is conducting studies to determine the feasibility of providing local flood protection along the Blackwater River in Salisbury. Preliminary studies indicated that flood control measures would be economically justified, but further detailed studies are necessary to fully evaluate flood control alternatives and impacts. A feasibility cost-sharing agreement outlining the scope

and cost of these additional studies was prepared and executed between the Commonwealth and the Corps in January 1999. Feasibility studies are underway, with the draft feasibility report and environmental assessment scheduled for completion during the late fall of 2001.

BROAD MEADOWS SALT MARSH RESTORATION QUINCY, MASSACHUSETTS (10th CD) - The New England District received approval in March 1999 to initiate a feasibility study for the restoration of 37 acres of saltmarsh habitat, 29 acres of recreational grass/open space, and 12 acres of saltwater channels and pools at Broad Meadows Marsh. The city of Quincy is the sponsor for the 75 percent federal/25 percent nonfederal effort. The restoration would provide meaningful and productive ecological improvements to a degraded marsh that can support increases in marine life populations. The draft feasibility report is scheduled for completion in the fourth quarter of 2001. Pending availability of design funds, plans and specifications are scheduled to be completed in the summer 2002.

COASTAL AMERICA (10th CD) - The New England District continues to chair the Northeast Regional Implementation Team (NERIT) for Coastal America. NERIT has focused its efforts on habitat restoration and, in particular, restoration of tidally constricted salt marshes. The Corps has assisted these efforts at several sites throughout the state. The Sagamore Marsh Restoration project, noted below, is an example of current Corps assistance. The Cape Cod transportation corridor has also been evaluated for tidally constricted salt marshes. An interagency Memorandum of Understanding has been signed to formally document the Coastal America partners' commitment to wetlands restoration, with Corps staff serving on the advisory committee of the Massachusetts Wetlands Restoration and Banking Program.

On November 29, 2000, the Assistant Secretary of the Army, Dr. Joseph Westphal, as chair of Coastal America, presented awards and a letter of congratulations from Vice President Al Gore, to the Massachusetts Corporate Wetlands Restoration Partnership. During this ceremony EOEa Secretary, Robert Durand, gave the Corps and the Coastal America team an official MA EOEa "Green Seal" for their support of habitat restoration in the Commonwealth.

GULF OF MAINE INITIATIVE - The New England District is a member of the Gulf of Maine working group, providing this joint U.S./ Canadian committee with water resource planning expertise. Technical support in applications of sediment chemical mapping for Boston Harbor is being provided. New England District staff members are participating in Gulf of Maine Workshops and these workgroups are discussing ways in which the U.S. and Canadian can partner through the Gulf of Maine program.

MANHAN DAM AQUATIC ECOSYSTEM RESTORATION STUDY (1st CD) - Currently, the Manhan Dam on the Manhan River in Easthampton blocks the upstream migration of anadromous fish species, specifically Atlantic Salmon. There are many tributaries flowing into the Manhan River above the project dam. Generally the tributaries are clear, cold, fast flowing, shady, and with no visible algae growth. It appears that the tributaries can provide very good fish spawning habitat. Currently, Atlantic Salmon are regularly stocked in the areas upstream from the dam. Also, the presence of other anadromous species (i.e., shad, blueback herring) in the pools below the dam indicates that if fish passage was provided, it would be utilized by these species as well as salmon to access the spawning and nursery habitat upstream from the dam.

The district is conducting a design analysis

under the Corps "Aquatic Ecosystem Restoration Program" Section 206 A Preliminary Restoration Plan (PRP) determined that plans and specifications be completed. The city of Easthampton is the sponsor for the 65 percent federal/35 percent nonfederal effort. Completion of the contract documents is slated for fall 2001, with construction likely to be undertaken during low-flow conditions in late summer 2002. *Total project cost is estimated to be \$500,000.*

MUDDY RIVER (4th, 8th and 9th CDs) - The \$450,000 feasibility study of water quality and aquatic habitat issues, cost-shared equally between the Commonwealth and the Corps, was submitted for Corps headquarters and for resource agency review in 1996. Based on agency comments and headquarters review, additional study was required to refine the recommended plan. This increased the total study cost to \$530,000. Work on this additional effort was completed and a revised report issued for public review in 1998, including a public meeting. Subsequently, the Commonwealth of Massachusetts asked to delay its decision concerning implementation of the recommended plan pending further study of other water resource related needs, particularly flood control.

MUDDY RIVER FLOOD DAMAGE REDUCTION AND ENVIRONMENTAL RESTORATION INVESTIGATION (4th, 8th and 9th CDs) - In October of 1996, the Boston area received approximately 8-10 inches of rain resulting in severe flooding along and adjacent to the Muddy River. The majority of the damages were to residences and businesses along the river and to the underground Massachusetts Bay Transit Authority (MBTA) rail system in nearby Kenmore Square. Severe flooding also occurred in several tributary areas, particularly Stony Brook. As a result of this event, the city of Boston Parks and Recreation Department, working with the Commonwealth of

Massachusetts and FEMA, developed and proposed the city's Master Plan. This plan is presented in the city's Environmental Notification Form, "The Emerald Necklace Environmental Improvements Master Plan, Phase I Muddy River Flood Control, Water Quality and Habitat Enhancement," dated January 1999. The objectives of the plan are to increase flood control, improve water quality and enhance aquatic/riparian habitat within the Muddy River by dredging accumulated sediment. The plan calls for deepening the Muddy River system, upgrading flood control, removing nuisance vegetation, improving fisheries/wildlife habitat and water quality, and promoting and enhancing recreational use of Emerald Necklace parklands. The project also includes bank stabilization and improvements to restrictive drainage culverts. The Water Resources Development Act of 1999 authorized the Corps to evaluate the city's plan and determine whether "the plans are cost-effective, technically sound, environmentally acceptable and in the federal interest."

The district's draft Evaluation Report was completed in June 2000, and distributed for review by interested parties. The report determined that the benefits of the city's Master Plan exceed its costs, but continued federal involvement by the Corps would require the preparation of a decision document and environmental report to satisfy the requirements of the National Environmental Policy Act (NEPA). This document would refine and optimize the various components of the plan. The Evaluation Report was finalized in November 2000.

Section 522 of the Water Resources Development Act of 2000 authorized the Corps to, "carry out the project for flood damage reduction and environmental restoration, Muddy River, Brookline and Boston, Massachusetts, substantially in accordance with the plans, and subject to the conditions, describe in the draft evaluation report of the

New England District Engineer entitled, "Phase I Muddy River Master Plan," dated June 2000." Based on this, and with funds provided in the fiscal year 2001 Energy and Water Development Appropriations Act, the New England District has initiated preparation of the required decision documents.

NATIONAL ESTUARY PROGRAM - The district is currently supporting implementation of the comprehensive conservation and restoration plans of the Massachusetts/Cape Cod Bays and the Buzzards Bay National Estuary Programs (NEP). Activities include attendance at committee meetings and transfer of our data to the NEP Geographic Information Systems. Additionally, we are working on numerous habitat restoration initiatives.

NEPONSET RIVER, BOSTON/MILTON (9th CD) -The Massachusetts Executive Office of Environmental Affairs (EOEA) requested that the Corps of Engineers conduct a study of the Neponset River to explore the possibilities of restoring a degraded aquatic ecosystem to a less degraded, more natural condition. This work is being conducted under the Corps "Aquatic Ecosystem Restoration Program" Section 206 of the Water Resources Development Act of 1996. The project will have a local cost-share of 35 percent, with the balance being federally funded.

The study will evaluate complete removal, partial breaching, or installation of a fish passage structure at the Walter Baker and Tilestone and Hollingsworth dams along the river. A Preliminary Restoration Plan (PRP) determined that a feasibility level study of a potential project is warranted. *The Feasibility Study was initiated in spring 2001 with scheduled completion in winter 2001/2002.*

PARKER POND, GARDNER (1st CD) – A report on alternatives for aquatic habitat restoration is being prepared by the New

England District. Sedimentation and encroaching vegetation has reduced and degraded fish habitat in this 38-acre pond. A plan to excavate 178,000 cubic yards of sediment has been proposed. Completion of the study is on hold until an alternative to the original disposal site for the sediment can be identified.

SAGAMORE SALT MARSH RESTORATION PROJECT (10th CD) - The Sagamore Marsh, situated on the north side of the Cape Cod Canal in the towns of Bourne and Sandwich, was identified as a high priority salt marsh restoration site. Under the Continuing Authorities Program, a project utilizing funds provided by Section 1135 for the Project Modifications for Improvement of the Environment, Water Resources Development Act of 1986, restored 56 acres of saltmarsh at a cost of \$2.44 million. The nonfederal sponsor was the Massachusetts Department of Environmental Management. The construction contract was awarded in spring 2000, with most site work completed by December 2000. The project also includes a five-year long-term ecology monitoring of the marsh, with support from the U.S. Geological Survey.

YARMOUTH RUN POND COASTAL ECOSYSTEM RESTORATION STUDY (10th CD) -The Run Pond restoration site is located on Nantucket Sound in Yarmouth. Currently there is limited tidal exchange at the site. This pond experiences extensive algal blooms each summer, and the surrounding salt marsh shows signs of degradation as evidenced by the invasion of phragmites. Tidal flows to the pond are controlled by about a 900-foot culvert. Improvement to the salt pond and salt marsh will result in an increased finfish and shellfish population, and higher quality salt marsh vegetation.

We will examine the culvert to determine its capacity and establish if improvements are warranted. The study will be conducted under

the Corps "Aquatic Ecosystem Restoration Program", Section 206 of the Water Resources Development Act of 1996. A Preliminary Restoration Plan (PRP) determined that a feasibility level study of a potential project is warranted. The estimated \$160,000 feasibility study was initiated in March 2000, with expected completion in fall 2001.

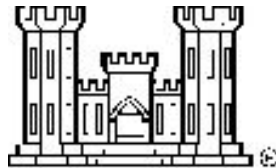
COASTAL MASSACHUSETTS ECOSYSTEM RESTORATION STUDY (6th, 7th, 9th, & 10th CD's) – This Congressionally directed reconnaissance investigation was started in February 2001. The purpose is to identify the most significant ecological restoration opportunities that can be accomplished by the Corps in collaboration with the Commonwealth. The study area includes the coastal waters from the New Hampshire border to Provincetown. The district is working with EOEA, DEM, CZM, and other interested parties to develop a list of potential restoration sites. The reconnaissance report is scheduled to be completed in July 2001.

STEWART'S CREEK, BARNSTABLE (10th CD) – The town of Barnstable, with strong support of MA EOEA's Wetlands Restoration Program, has requested the Corps undertake a Section 206 Aquatic Ecosystem Restoration Project at Stewart's Creek. The project will involve increasing tidal exchange to the Stewart's and Joshua Creeks wetlands. Currently a 24-inch diameter culvert under Ocean Avenue, which empties into Hyannis Harbor, restricts tidal interchange with this extensive wetlands resource. The invasive phragmites plant is contributing to the increased eutrophication of the saltwater and brackish marshes of the area. *This is a Coastal America Project and Preliminary Restoration Plan is being developed with subsequent coordination and approvals targeted for summer 2001.*

NATIONAL MARINE LIFE CENTER (NMLC), BOURNE (10th CD) – NMLC, with support from MA EOE's Wetlands Restoration Program, has requested the Corps undertake a saltmarsh restoration project under Section 1135 of the 1986 Water Resources Development Act, as amended. The project seeks to re-establish tidal interaction to a degraded saltmarsh by investigation of modification to an aging and undersized culvert to the Cape Cod Canal. NMLC seeks to re-establish this saltmarsh and develop an open-water pond to allow for rehabilitation of recovering sea mammals prior to their re-release to the open ocean environment. A Preliminary Restoration Plan has been drafted

and is being coordinated with NMLC. *The draft plan is to be forwarded to Corps Division headquarters in summer 2001 for review and approval.*

DEERFIELD RIVER FEASIBILITY STUDY (1st CD) – *The study of fish habitat restoration on the Green River in Greenfield, Mass., is an outgrowth of the 905(b) report originally intended to evaluate the Searsburg and Somerset dams in Vermont. The study will consider fish passage at four dams on the Green River, a Deerfield River tributary, as well as other fish habitat enhancement opportunities. The scheduled completion date is September 2003.*



Public Affairs Office
New England District
U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Presorted Standard
U.S. Postage
Paid
Concord, MA
Permit No. 494

Meter Code 40

Update Report